

FIG. 1

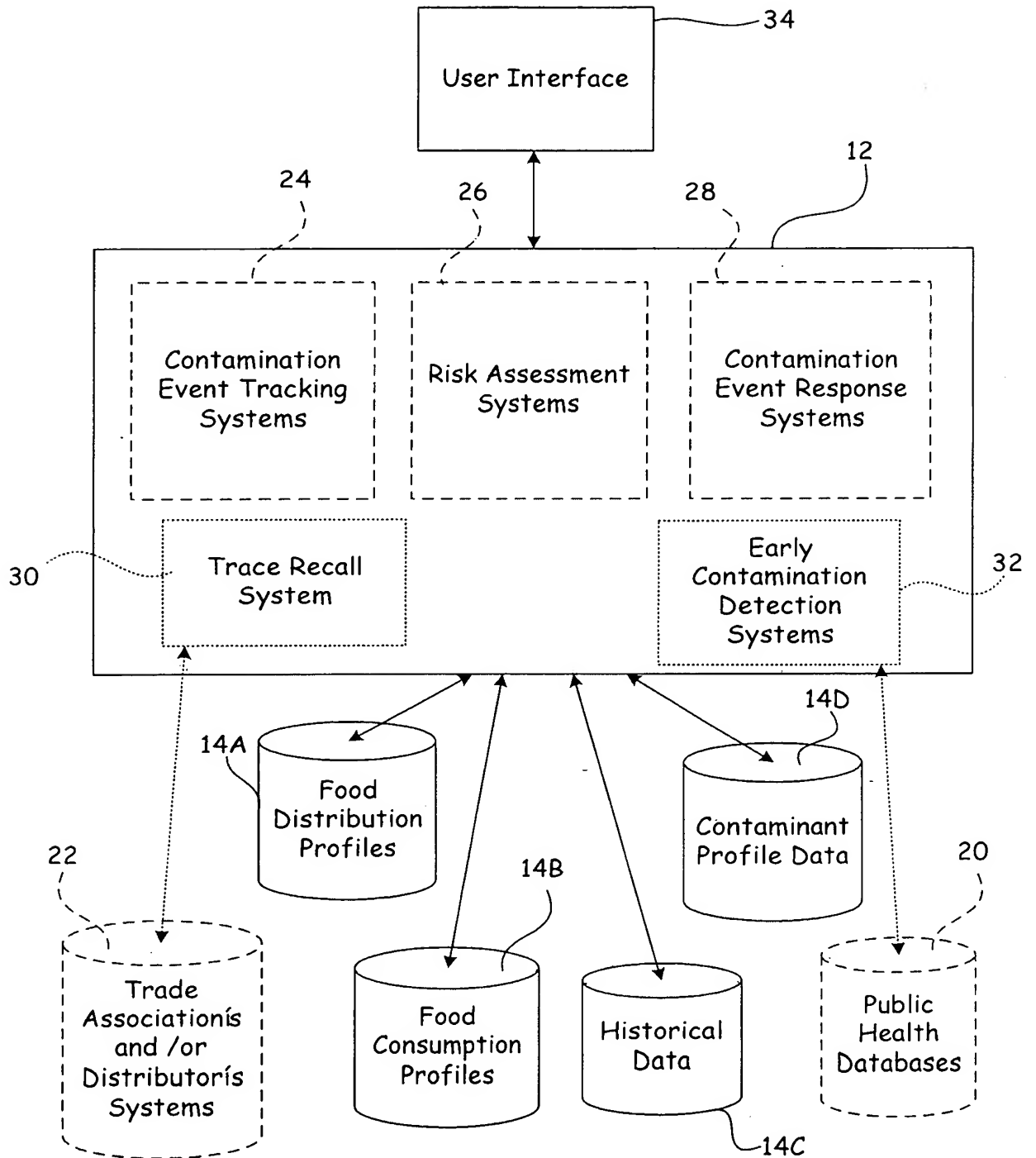
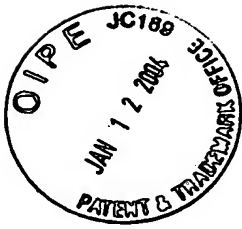
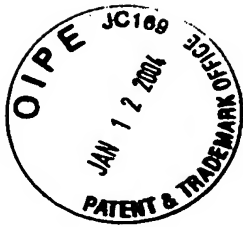


FIG. 2



	Location/Activity	Time at location	Elapsed Time	Source
<input type="checkbox"/>	Retail	1-10 days	1-10 days	Interviews
<input type="checkbox"/>	Home	1/2 - 6 days	1 1/2 - 16 days	Distributors
<input checked="" type="checkbox"/>	Consumption	1/2 - 10 days	2 - 26 days	Team Estimate
<input type="checkbox"/>	Symptoms	1 - 7 days	3 - 33 days	Literature
<input type="checkbox"/>	Medical Attention*	3 - 5 days*	6 - 38 days	Team Estimates
<input checked="" type="checkbox"/>	Mortality*	4 - 5 days*	7 - 32 days	Literature

\*From symptoms

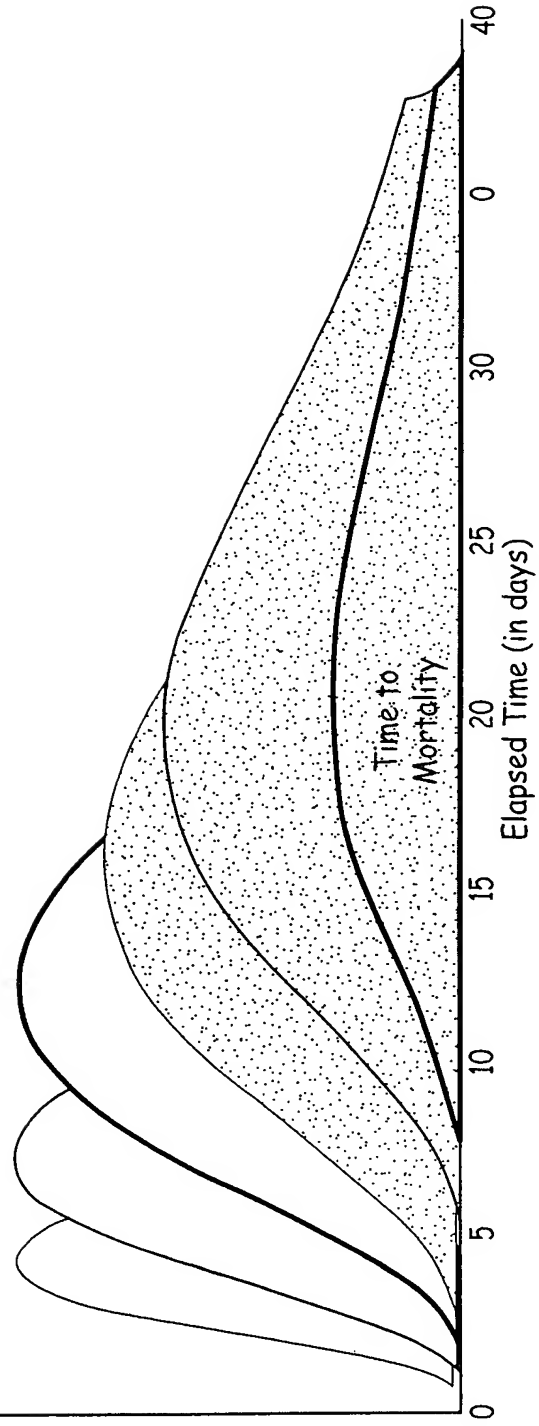
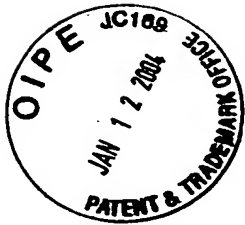
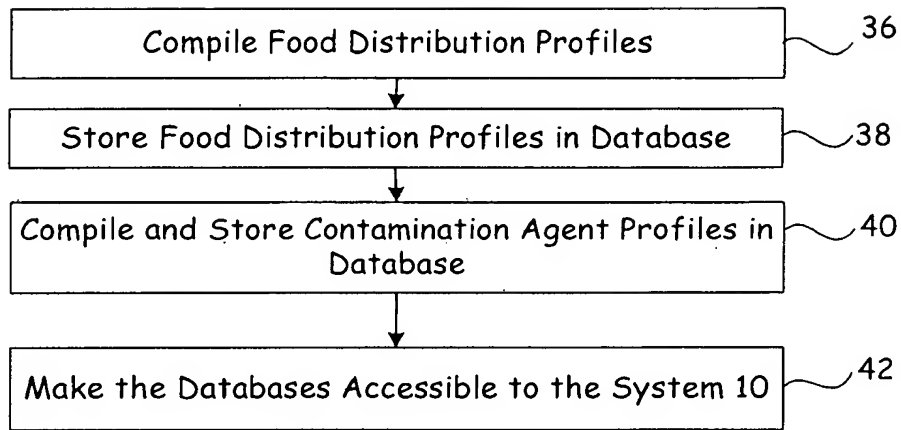


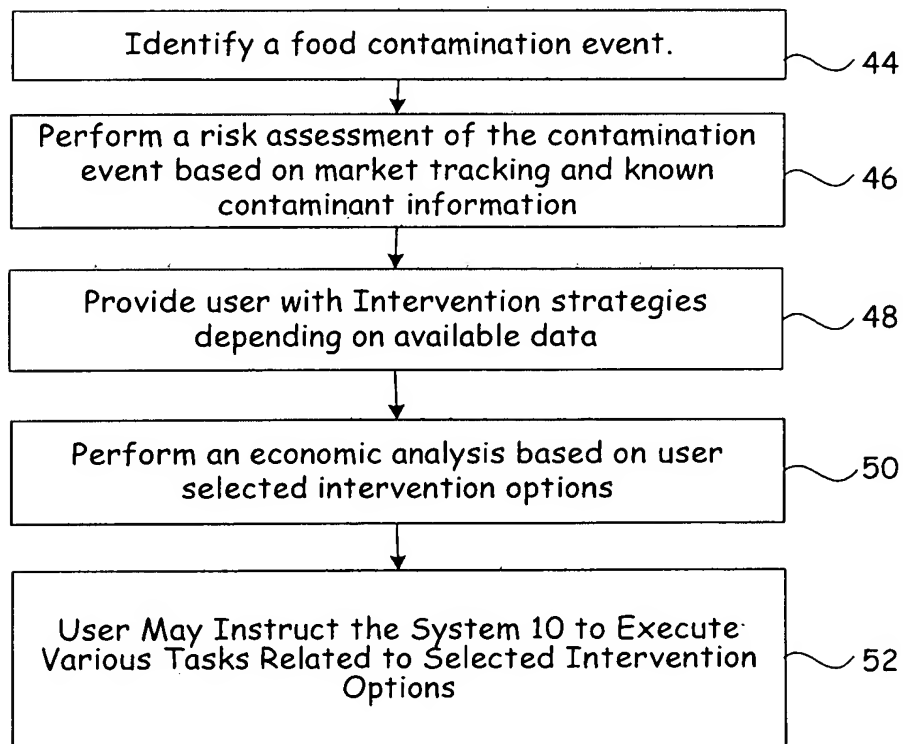
FIG. 3



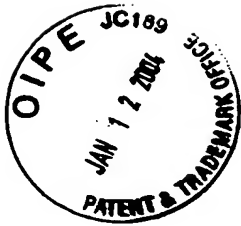
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**FIG. 4**



**FIG. 5**



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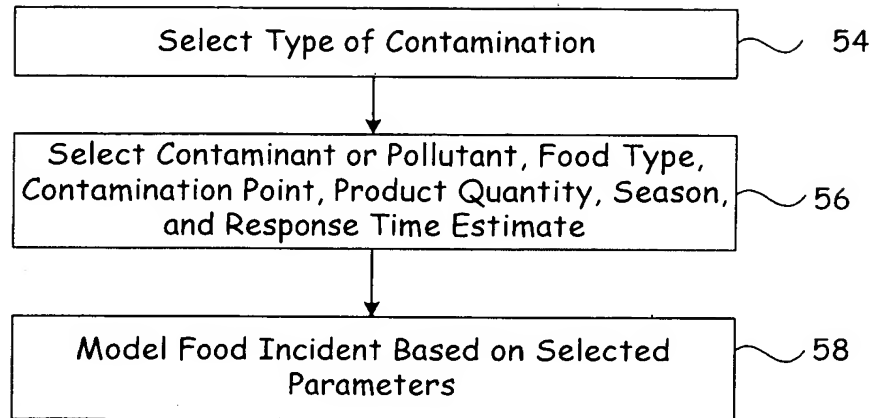


FIG. 6

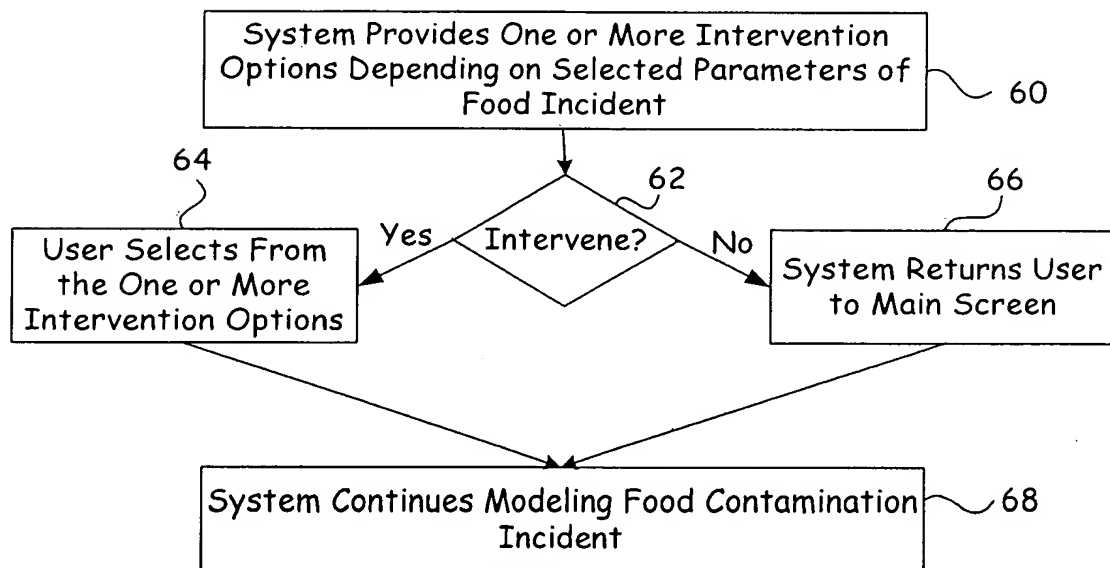
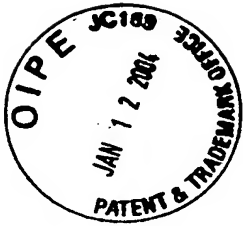


FIG. 7



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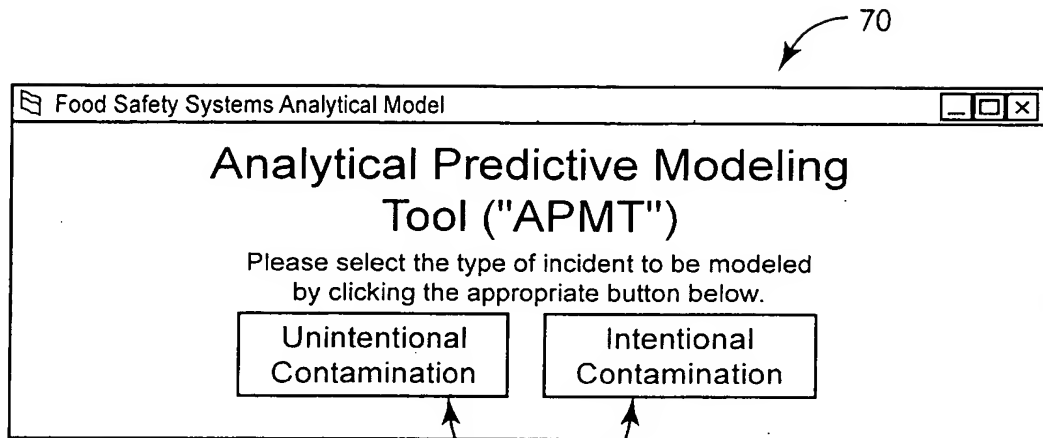


FIG. 8

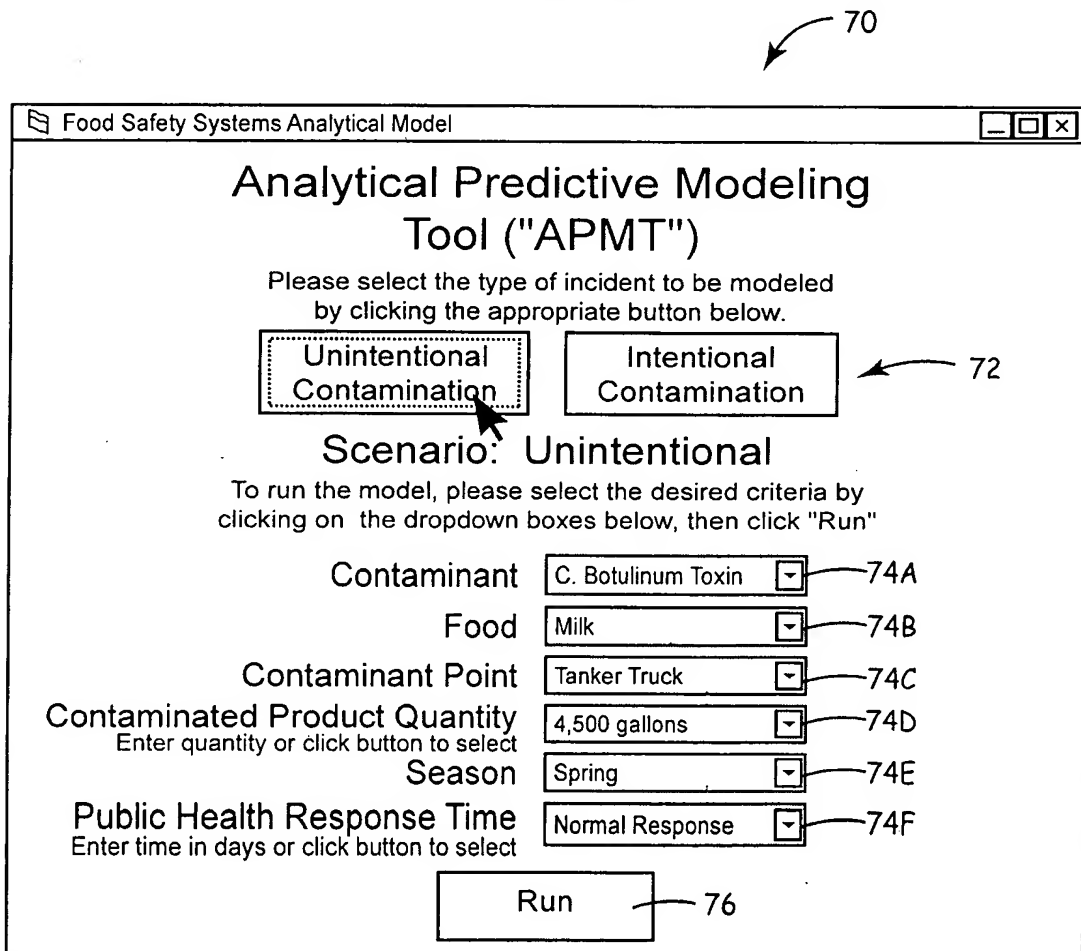
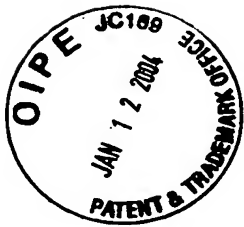


FIG. 9



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Food Safety Systems Analytical Model

## Analytical Predictive Modeling Tool ("APMT")

Please select the type of incident to be modeled by clicking the appropriate button below.

Unintentional Contamination

Intentional Contamination

72

### Scenario: Unintentional

To run the model, please select the desired criteria by clicking on the dropdown boxes below, then click "Run"

Agent

Food

Contaminant Point

Contaminated Product Quantity  
Enter quantity or click button to select

Season

Agency Reponse Time  
Enter time in days or click button to select

C. Botulinum Toxin

Milk

Tanker Truck

45,000 gallons

Spring

6 days

74

Run

76

FIG. 10

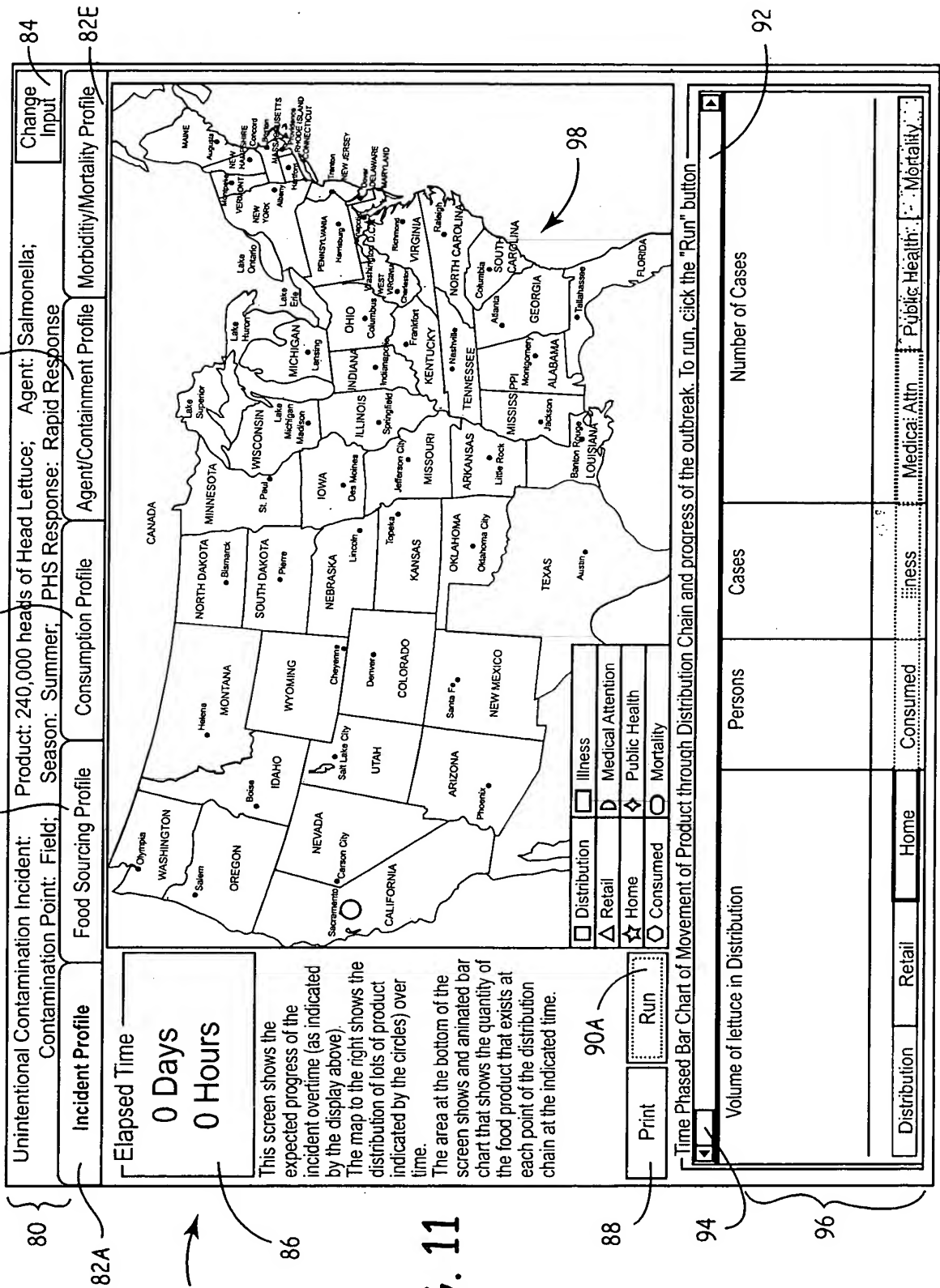


FIG. 11



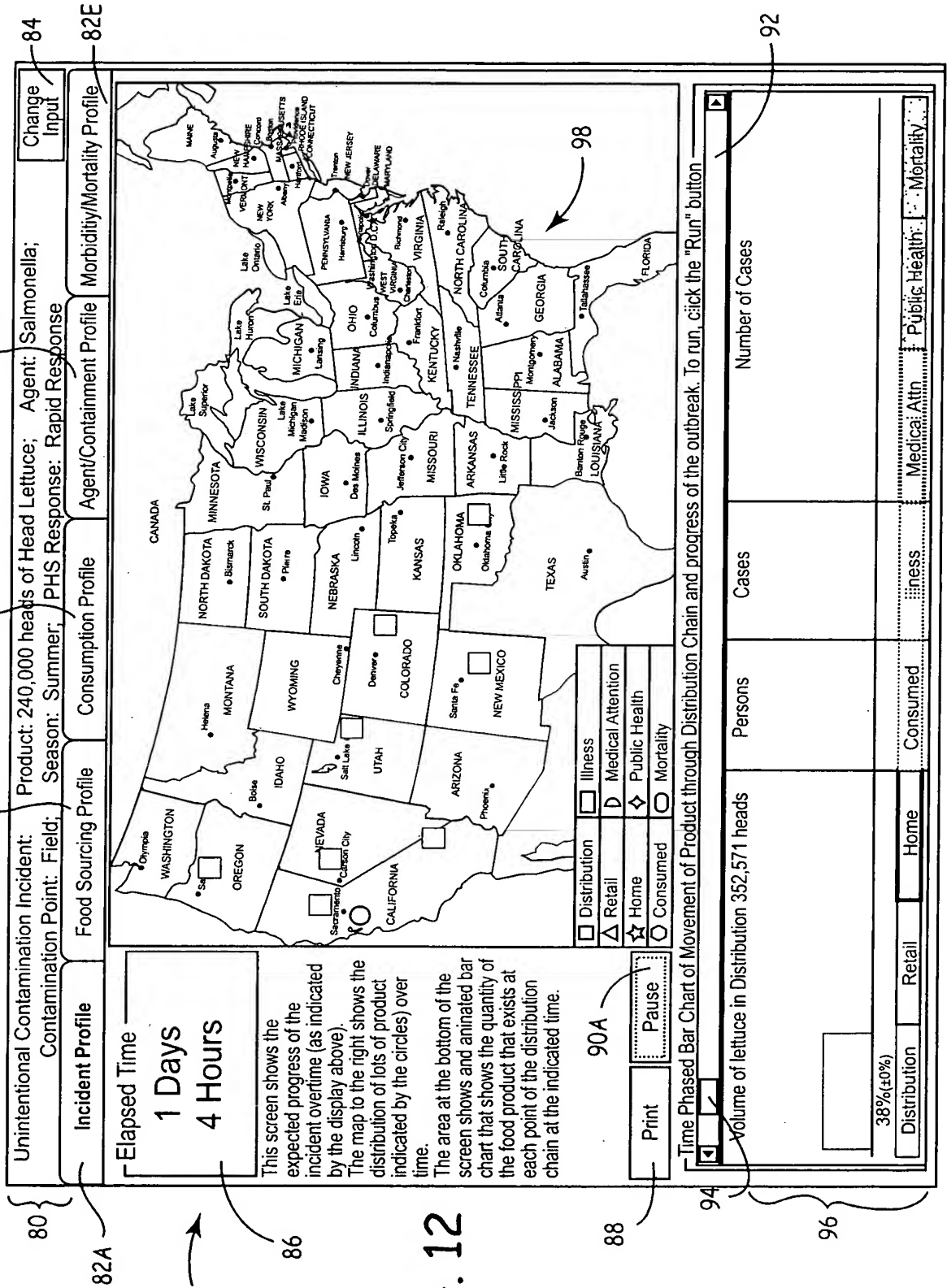
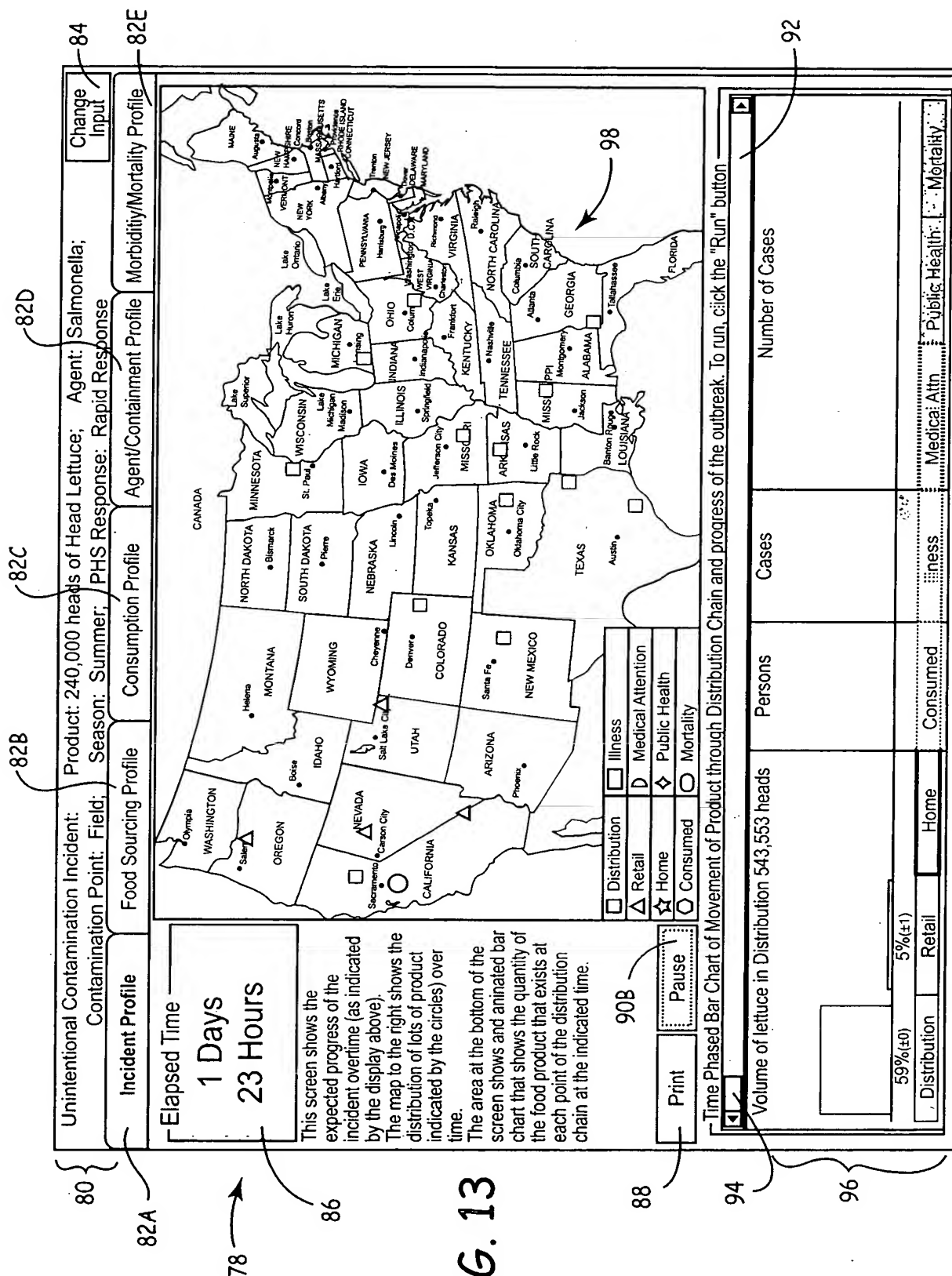
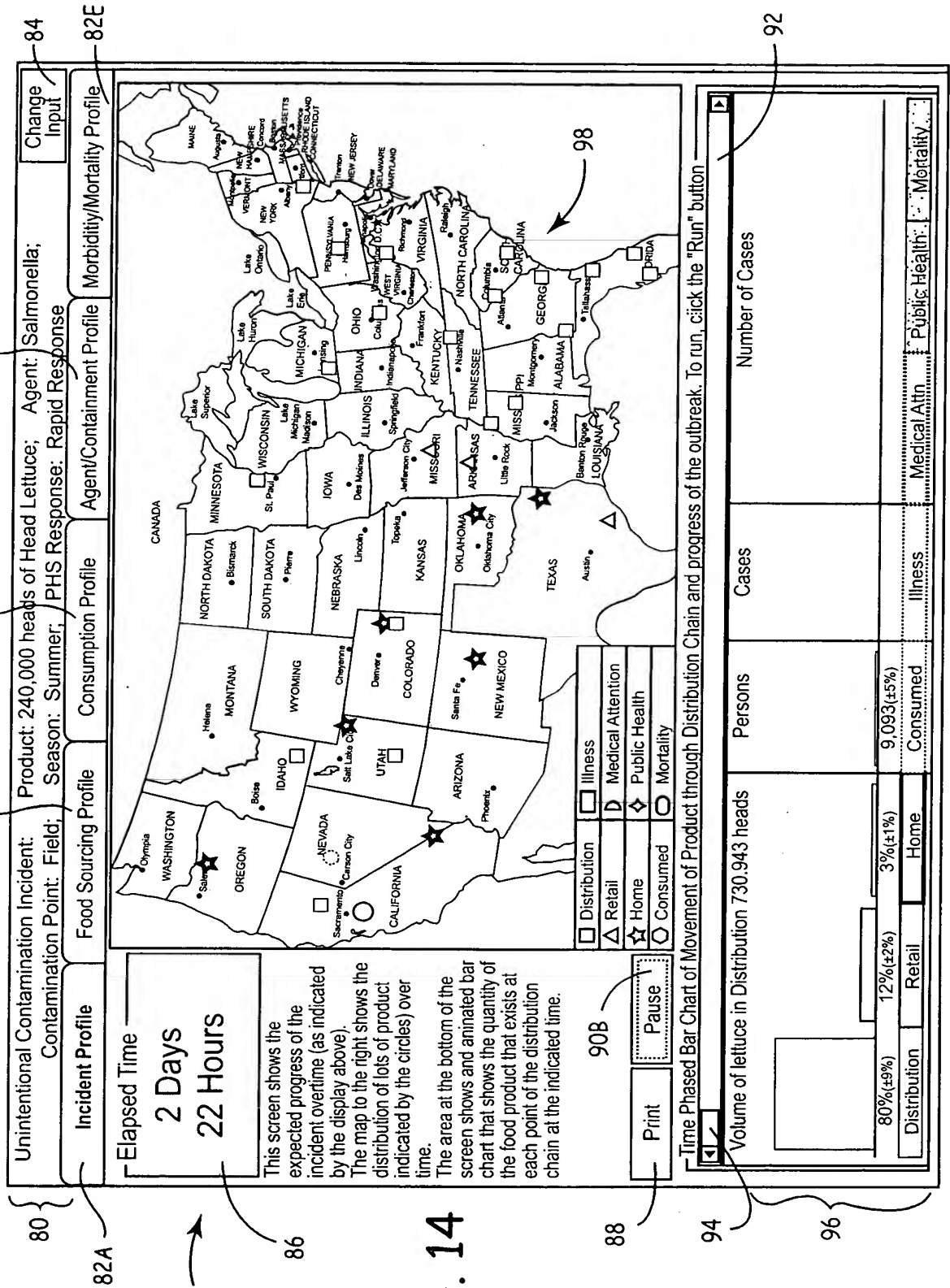


FIG. 12

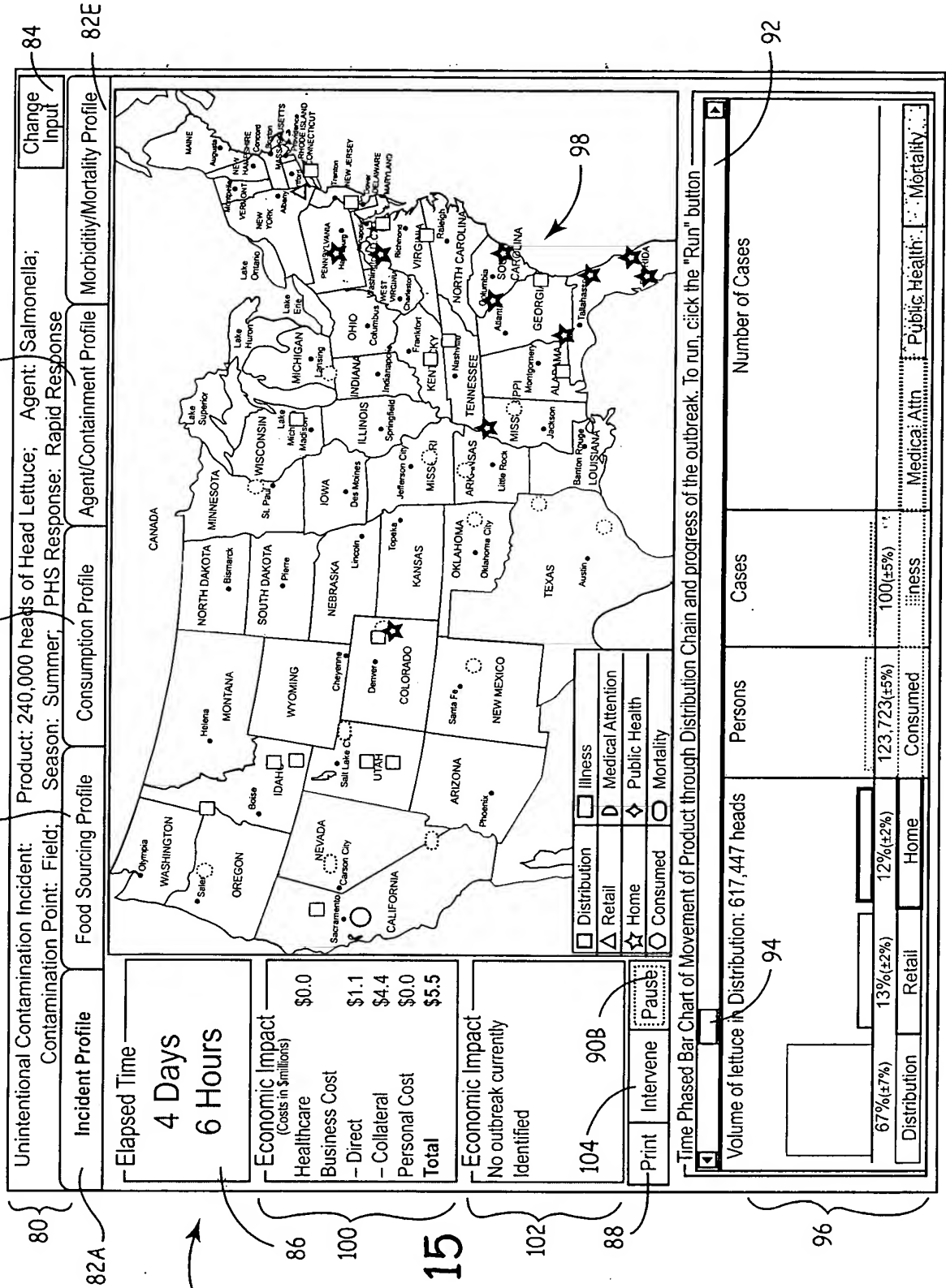
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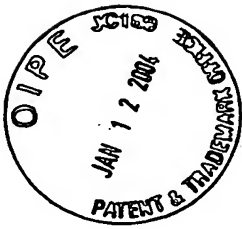


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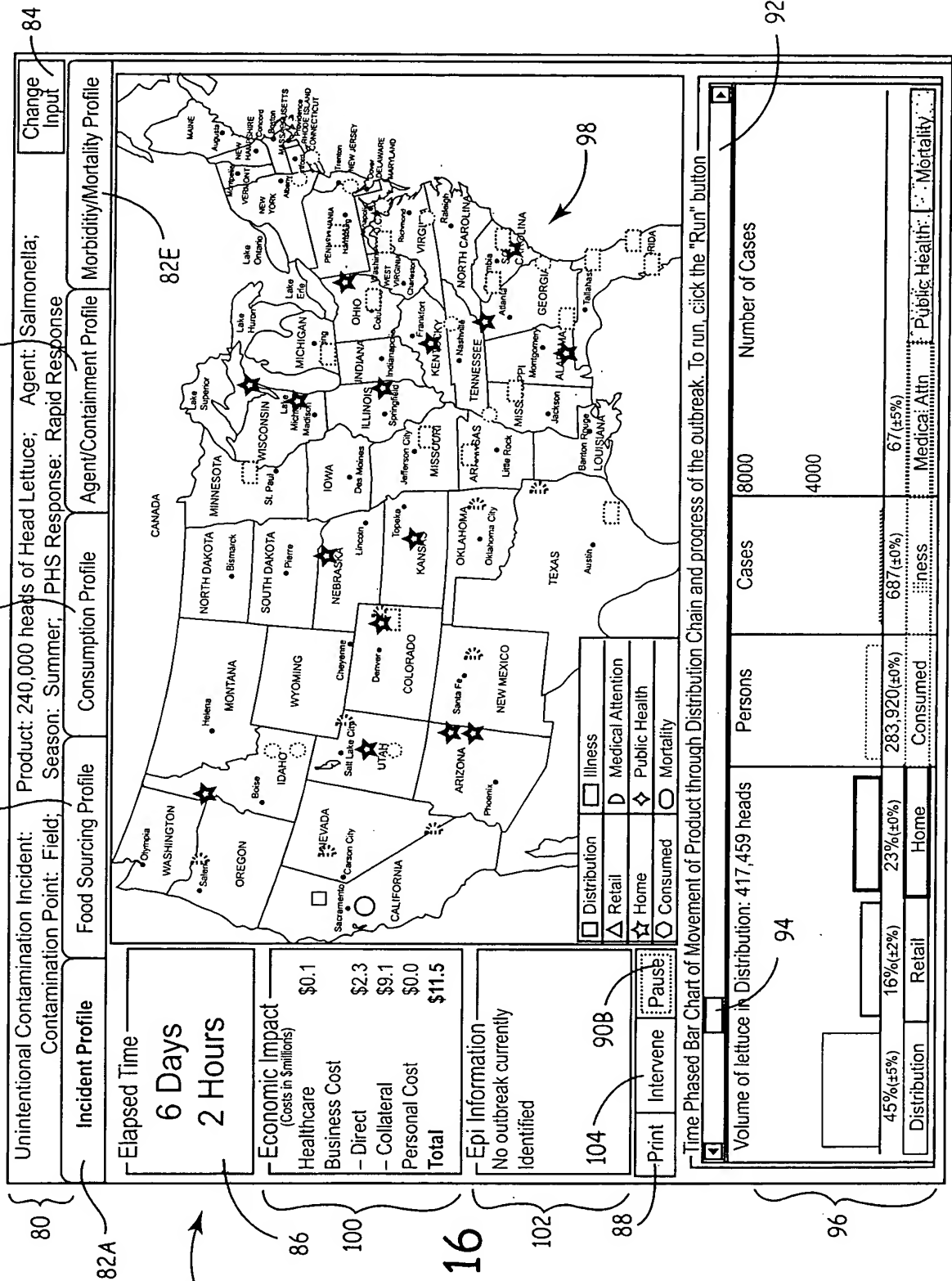
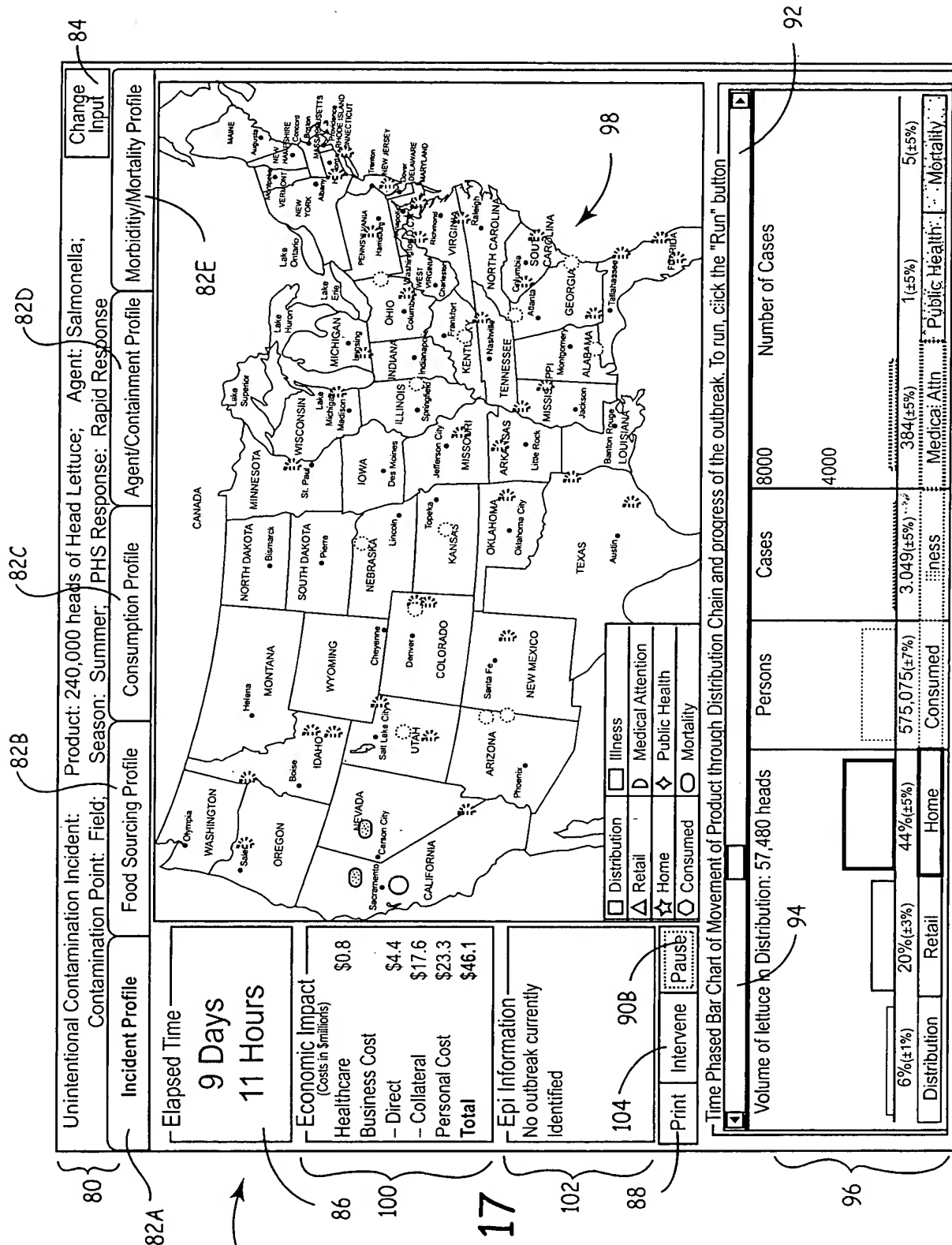


FIG. 16

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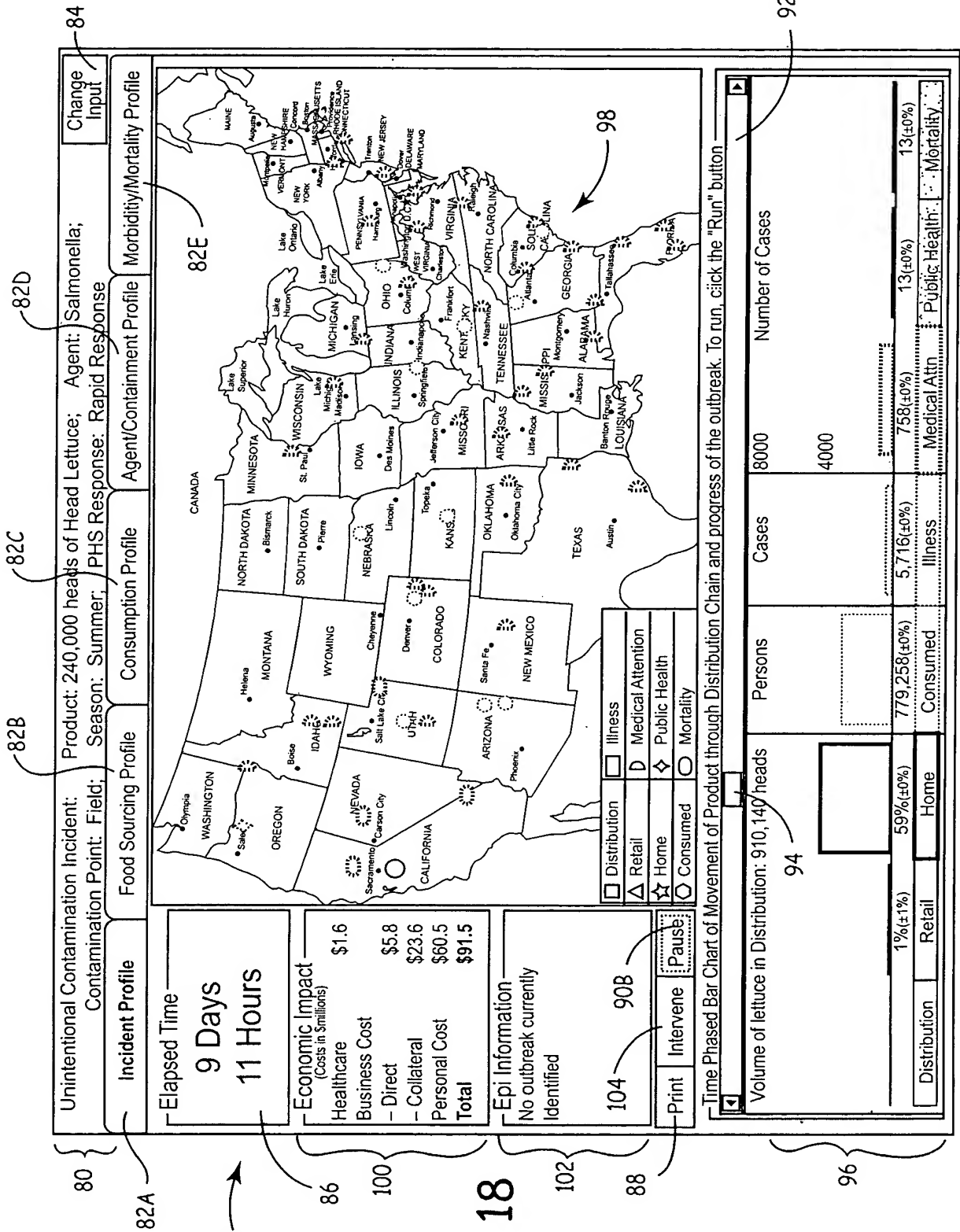
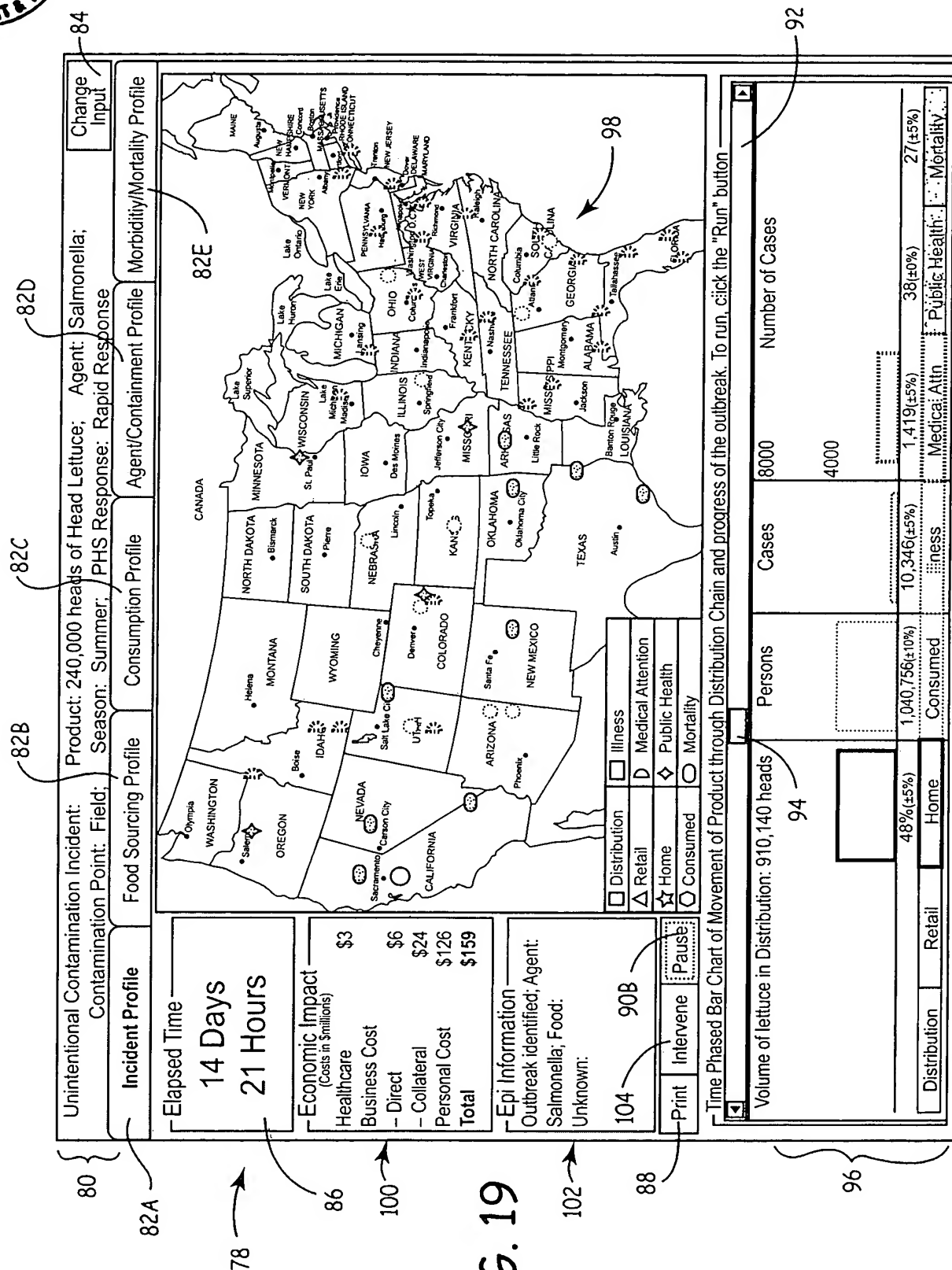
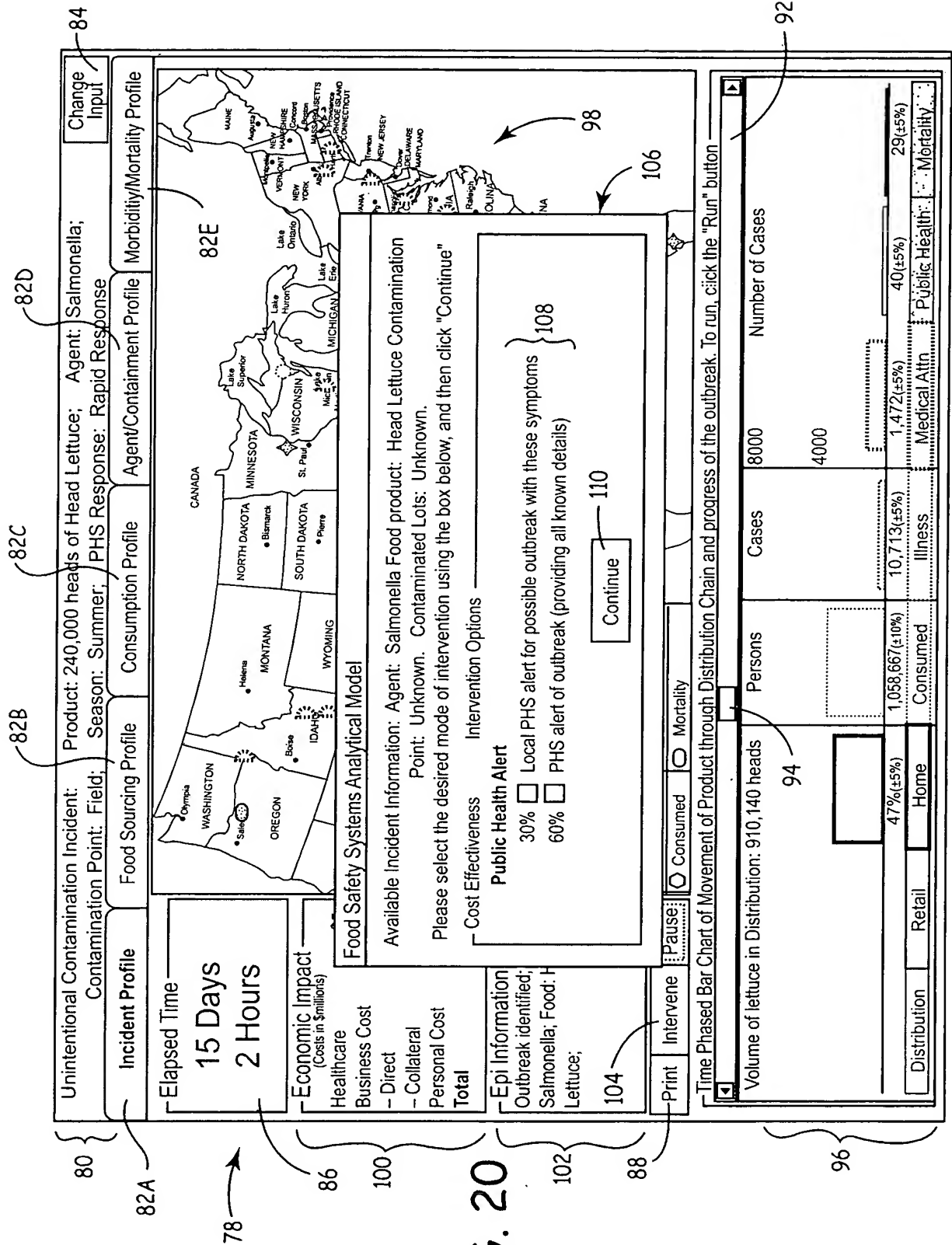
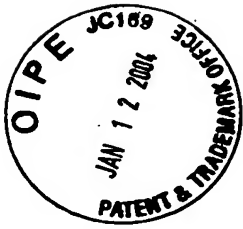
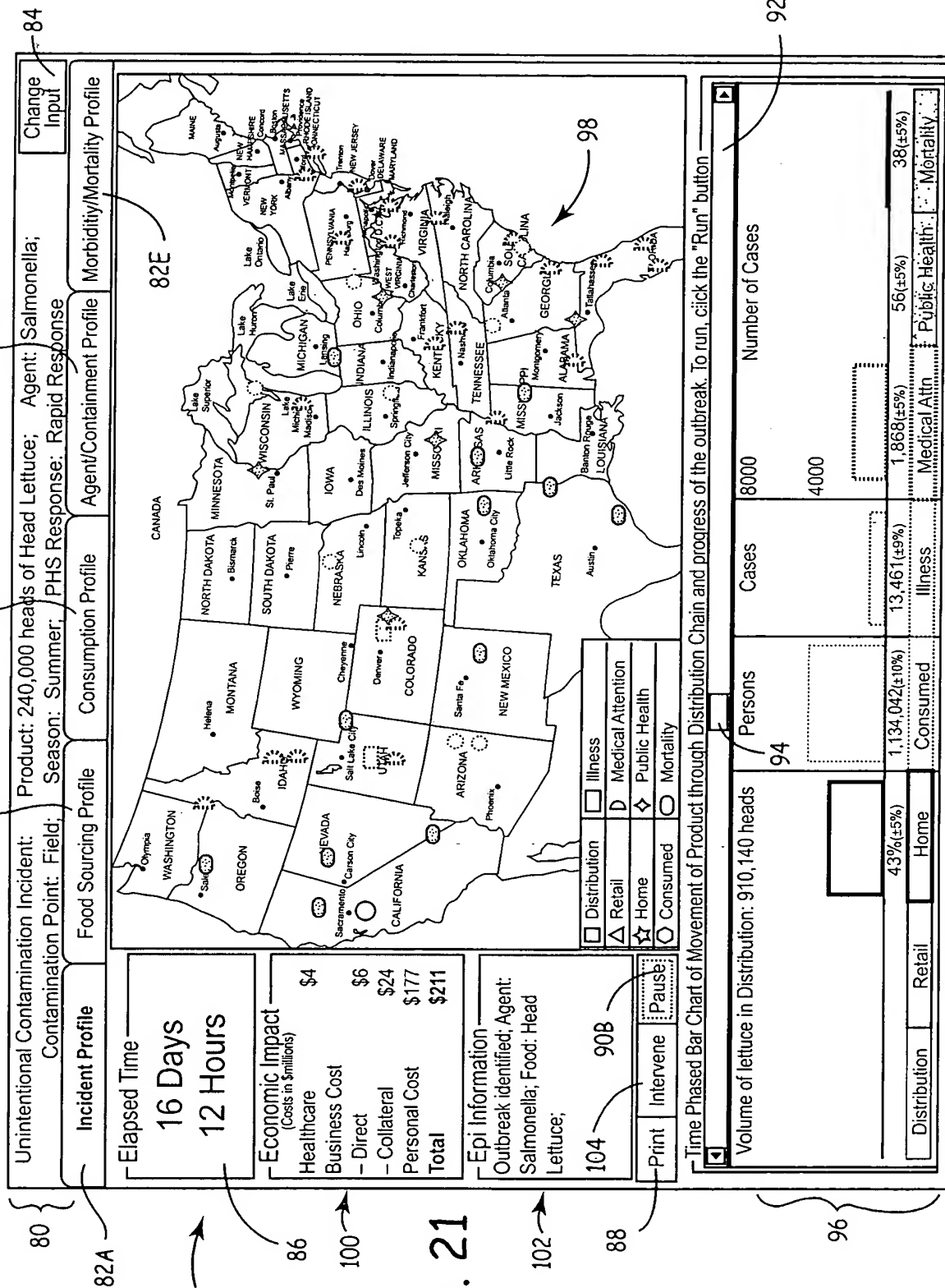


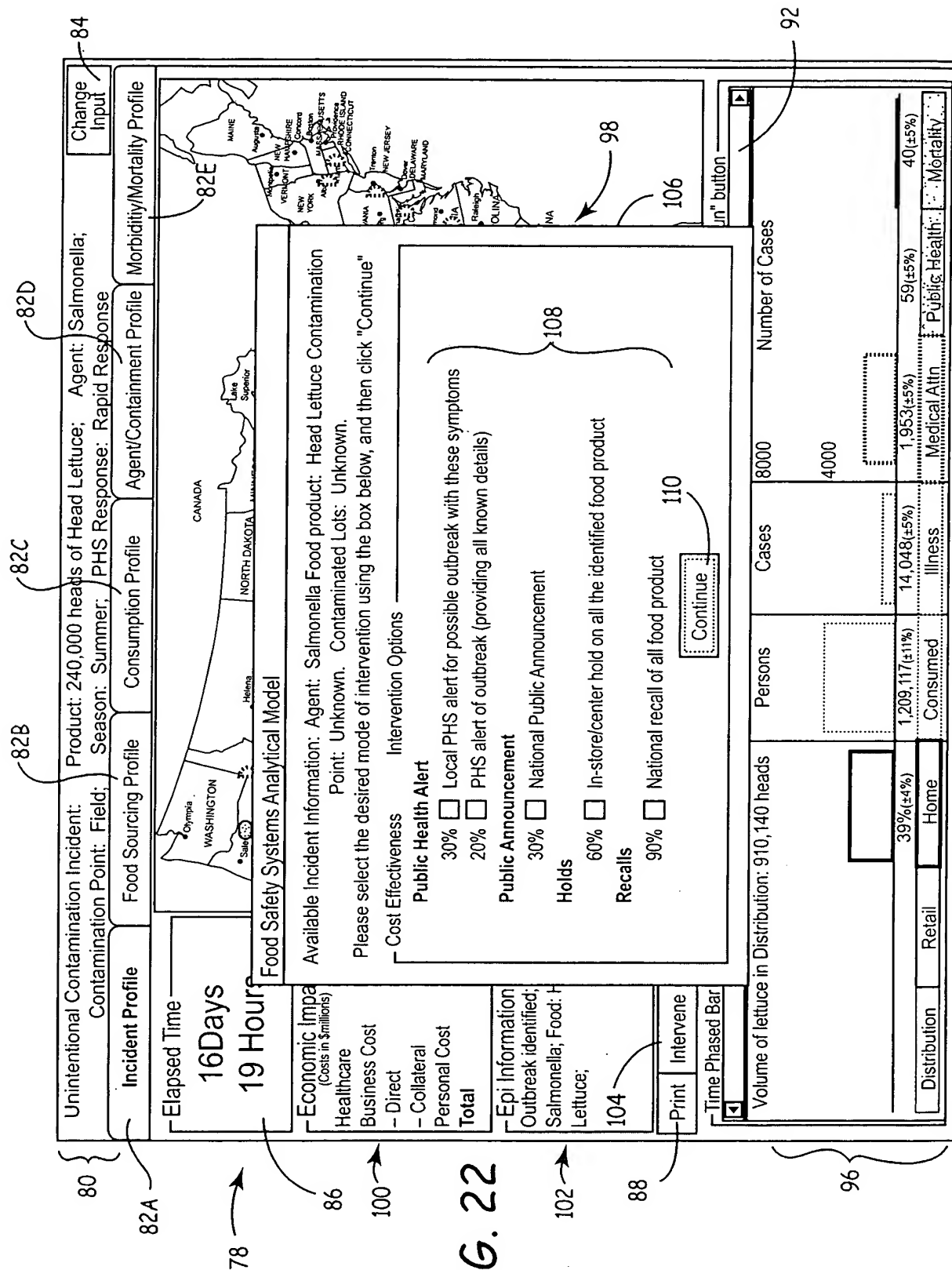
FIG. 18











Unintentional Contamination Incident: Product: 240,000 heads of Head Lettuce; Agent: Salmonella; Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

Change Input

Incident Profile

Elapsed Time: 16 Days 19 Hours

Economic Impact (Costs in \$millions):  
 Healthcare Business Cost:  
 - Direct  
 - Collateral  
 Personal Cost  
 Total

Epi Information  
 Outbreak identified; Salmonella; Food: Head Lettuce;

Food Sourcing Profile

Consumption Profile

Agent/Containment Profile

Morbidity/Mortality Profile

Food Safety Systems Analytical Model

Available Incident Information: Agent: Salmonella Food product: Head Lettuce Contamination Point: Unknown. Contaminated Lots: Unknown.

Please select the desired mode of intervention using the box below, and then click "Continue"

Cost Effectiveness Intervention Options

**Public Health Alert**

30% ☐ Local PHS alert for possible outbreak with these symptoms

20% ☐ PHS alert of outbreak (providing all known details)

**Public Announcement**

30% ☐ National Public Announcement

**Holds**

60% ☐ In-store/center hold on all the identified food product

**Recalls**

90% ☒ National recall of all food product

Continue

Volume of lettuce in Distribution: 910,140 heads

Persons Consumed: 1,209,117 (±11%)

Recall: 39% (±4%)

Home: 39% (±4%)

Cases: 8000

Illness: 14,048 (±5%)

Medical Attn: 1,953 (±5%)

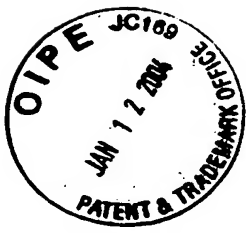
Public Health: 59 (±5%)

Mortality: 40 (±5%)

Number of Cases: 4000

Public Health: 40 (±5%)

FIG. 23



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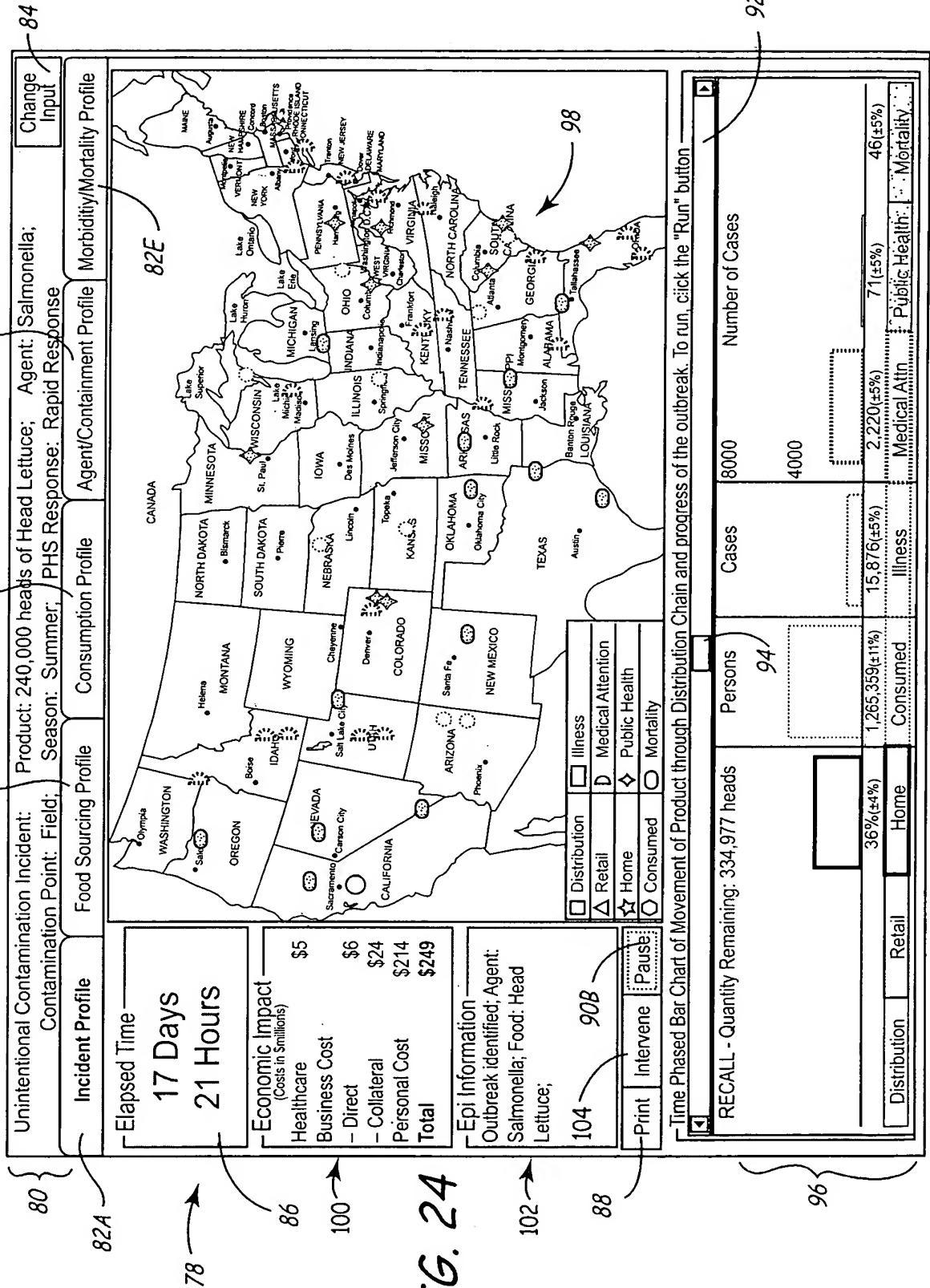
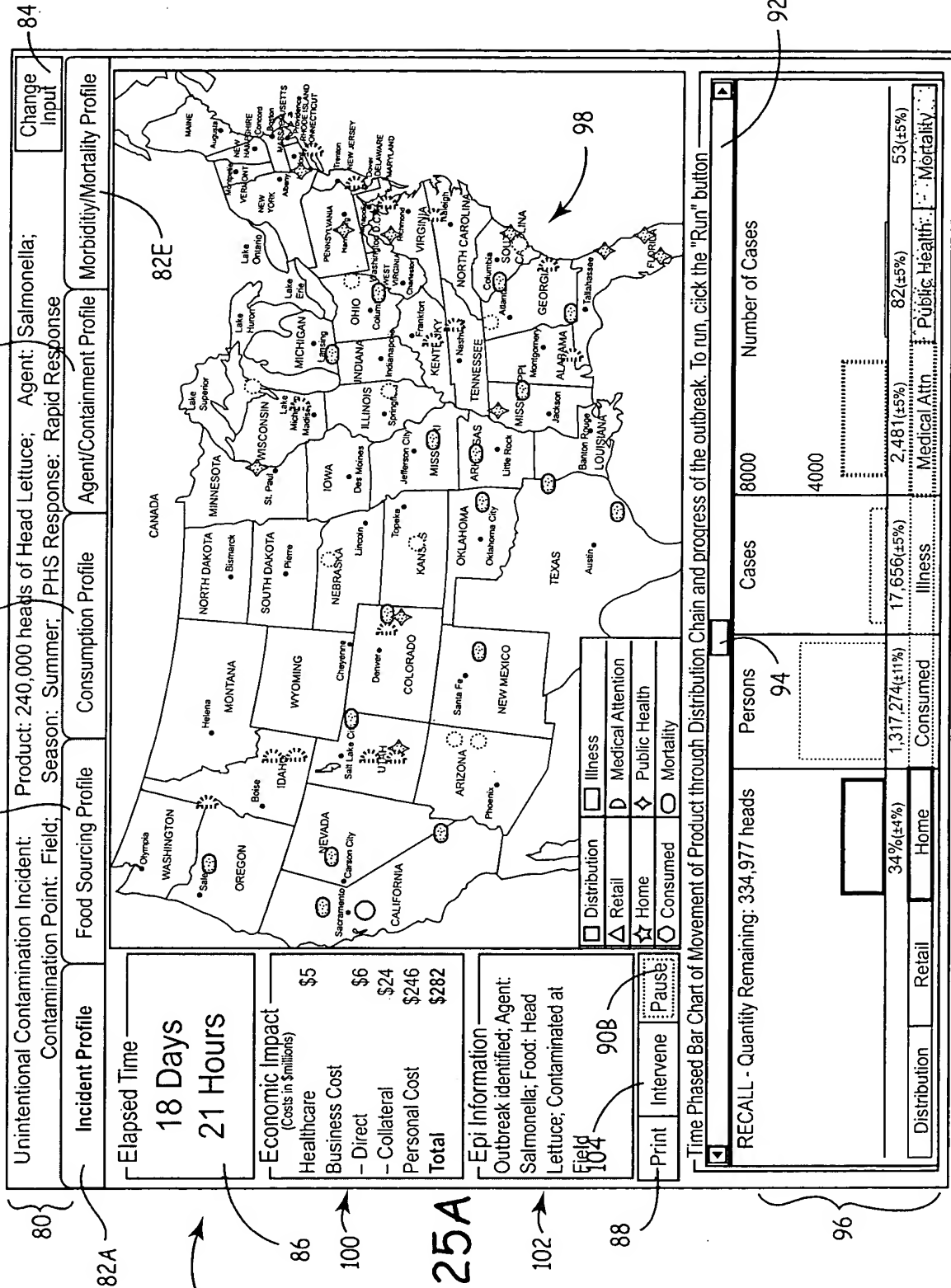


FIG. 24





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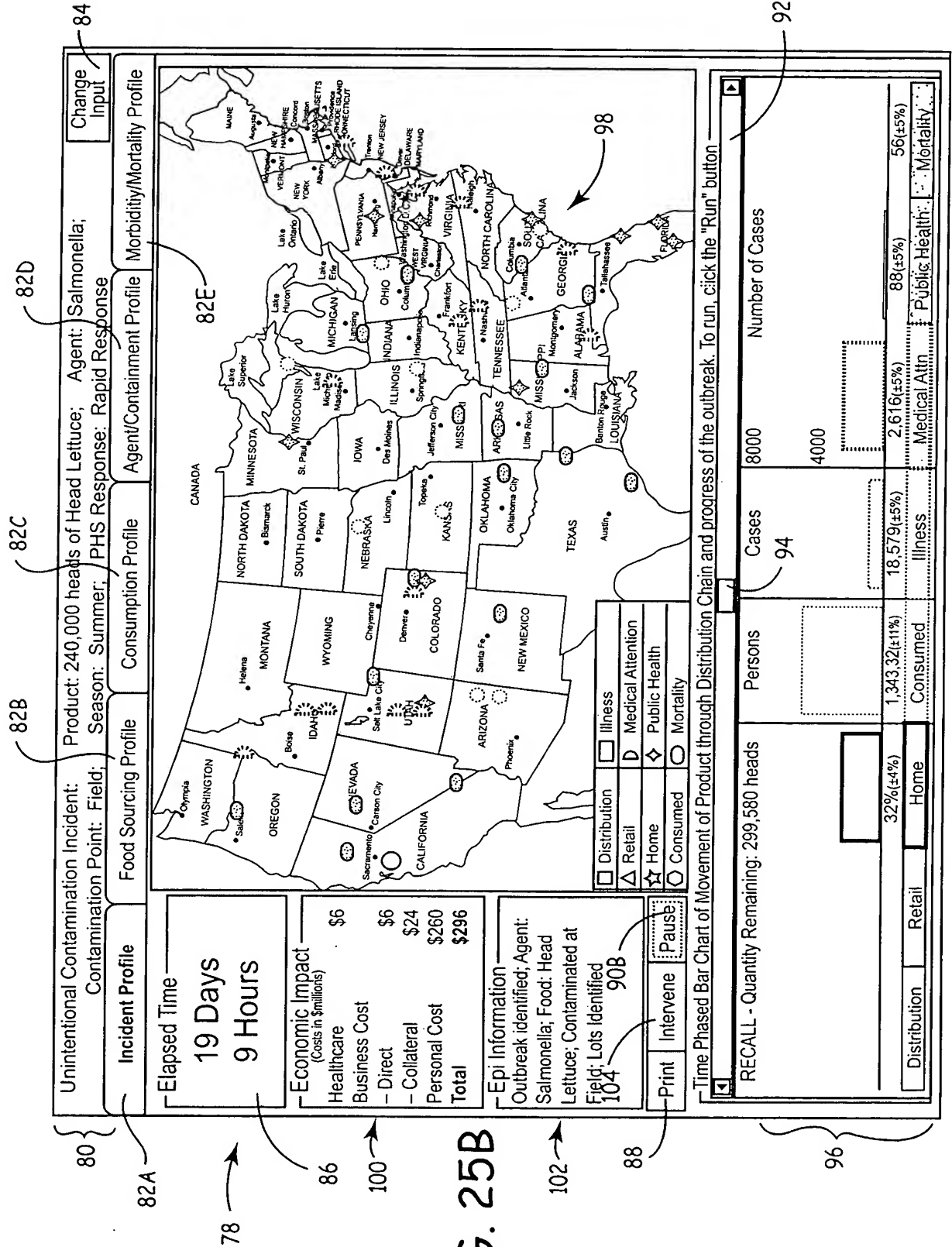


FIG. 25B

**Unintentional Contamination Incident:** Product: 240,000 heads of Head Lettuce; Agent: Salmonella;  
Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

**Incident Profile** **Food Sourcing Profile** **Consumption Profile** **Agent/Containment Profile** **Morbidity/Mortality Profile**

Elapsed Time: 20 Days 9 Hours

**Economic Impact** (Costs in \$millions)  
Healthcare Business Cost  
- Direct  
- Collateral  
Personal Cost  
Total

**Epi Information**  
Outbreak identified; Salmonella; Food: Head Lettuce; Contamination Field; Lots identified

Print Intervene

Time Phased Bar

RECALL - Quant

**Food Safety Systems Analytical Model**

Available Incident Information: Agent: Salmonella Food product: Head Lettuce Contamination Point: Field Contaminated Lots: Identified

Please select the desired mode of intervention using the box below, and then click "Continue"

**Cost Effectiveness** Intervention Options

**Public Health Alert**  
30% ☐ Local PHS alert for possible outbreak with these symptoms  
20% ☐ PHS alert of outbreak (providing all know details)

**Public Announcement**  
90% ☐ National Public Announcement

**Holds**  
40% ☐ In-store/center hold on all the identified food product  
35% ☐ In-store hold on all food product emanating from the point of contamination  
90% ☐ In-store/center hold on all specific lots of contaminated food

**Recalls**  
40% ☐ National recall of all food product  
35% ☐ Recall of all lots of food product emanating from the point of contamination  
90% ☐ Recall of the specific lots of food product that are contaminated

**Containment**  
45% ☐ Containment of locations that contain contaminated food product

Continue

Distribution	Retail	Home	Consumed	Illness	Medical Attn	Public Health	Mortality
			1,395,147(±11%)	20,492(±5%)	2,897(±5%)	100(±5%)	63(±5%)

82A 82B 82C 82D 84 86 100 102 104 106 108 110 92 96 78

FIG. 26



Unintentional Contamination Incident: Product: 240,000 heads of Head Lettuce; Agent: Salmonella; Contamination Point: Field; Season: Summer; PHS Response: Rapid Response

Incident Profile Food Sourcing Profile Consumption Profile Agent/Containment Profile Morbidity/Mortality Profile

Elapsed Time: 20 Days 9 Hours

Economic Impact (Costs in \$millions)

Healthcare	
Business Cost	
- Direct	
- Collateral	
Personal Cost	
Total	

Epi Information

Outbreak identified; Salmonella; Food: Head Lettuce; Contaminated Lots identified

Print Intervene

Time Phased Bar

RECALL - Quant

Food Safety Systems Analytical Model

Available Incident Information: Agent: Salmonella Food product: Head Lettuce Contamination Point: Field Contaminated Lots: Identified

Please select the desired mode of intervention using the box below, and then click "Continue"

Cost Effectiveness Intervention Options

Public Health Alert

30% ☐ Local PHS alert for possible outbreak with these symptoms

20% ☐ PHS alert of outbreak (providing all know details)

Public Announcement

90% ☒ National Public Announcement

Holds

40% ☐ In-store/center hold on all the identified food product

35% ☐ In-store hold on all food product emanating from the point of contamination

90% ☐ In-store/center hold on all specific lots of contaminated/food

Recalls

40% ☐ National recall of all food product

35% ☐ Recall of all lots of food product emanating from the point of contamination

90% ☐ Recall of the specific lots of food product that are contaminated

Containment

45% ☐ Containment of locations that contain contaminated food product

Continue

Map of the United States showing the location of the outbreak in the Northeast.

Map Labels: MAINE, NEW HAMPSHIRE, VERMONT, NEW YORK, CONNECTICUT, MASSACHUSETTS, RHODE ISLAND, NEW JERSEY, DELAWARE, MARYLAND, VIRGINIA, NORTH CAROLINA, SOUTH CAROLINA, ALABAMA, MISSISSIPPI, LOUISIANA, ARIZONA, NEVADA, CALIFORNIA, OREGON, WASHINGTON, IDAHO, MONTANA, WYOMING, NEBRASKA, KANSAS, OKLAHOMA, TEXAS, MINNESOTA, IOWA, MISSOURI, ARKANSAS, LOUISIANA, MISSISSIPPI, ALABAMA, GEORGIA, FLORIDA, SOUTH CAROLINA, NORTH CAROLINA, VIRGINIA, MARYLAND, DELAWARE, NEW JERSEY, NEW YORK, CONNECTICUT, MASSACHUSETTS, VERMONT, NEW HAMPSHIRE, MAINE.

Map Legend: 98 106

Map Scale: 100 miles

Map Title: Map of the United States

Map Author: OIPE

Map Date: JAN 12 2001

Map Version: 1.0

Map License: Public Domain

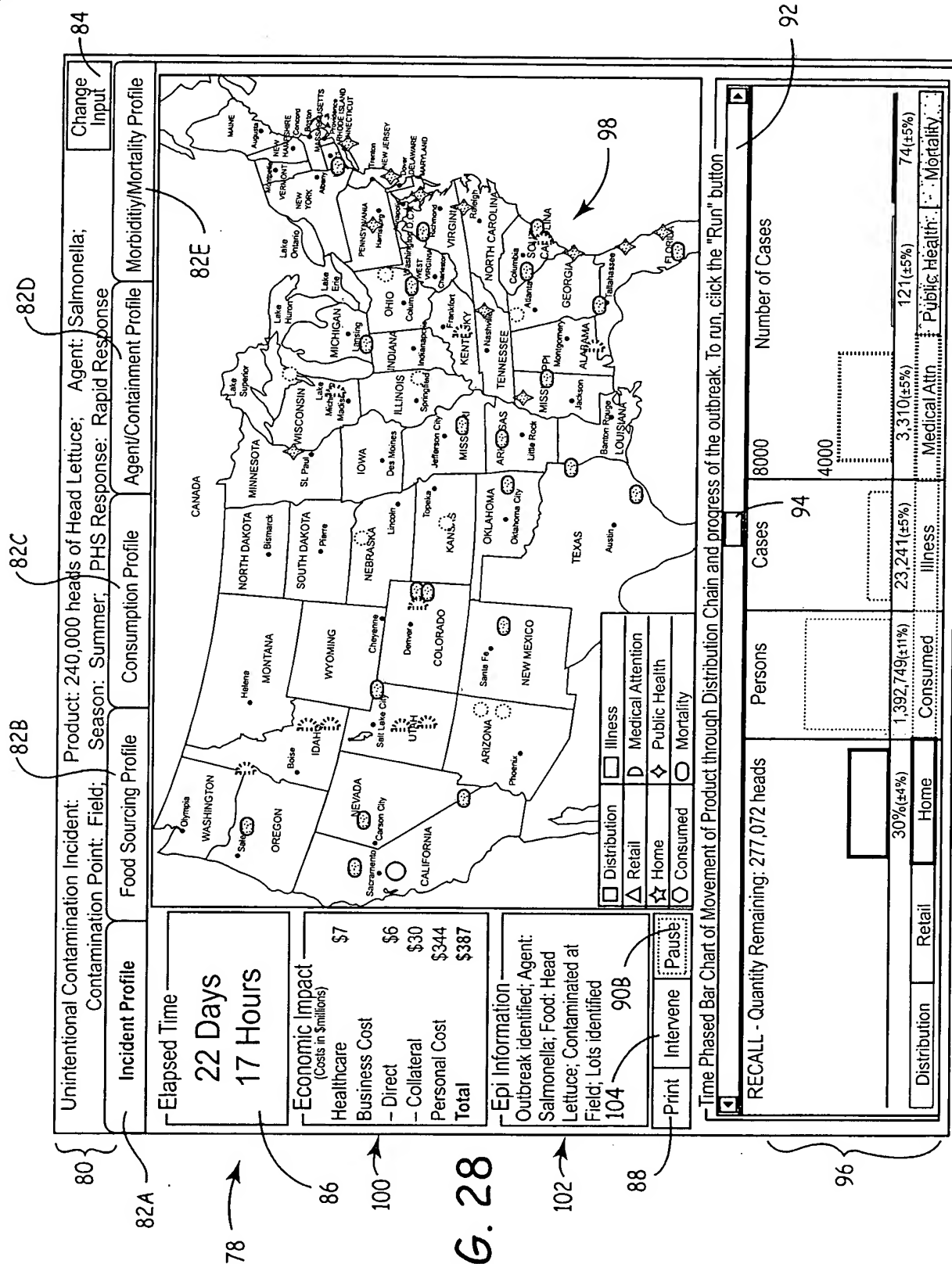
Map Copyright: OIPE

Map Disclaimer: This map is provided as a reference only. It is not intended to be used for navigation or other purposes. The user assumes all responsibility for the use of this map.

Map Footer: OIPE

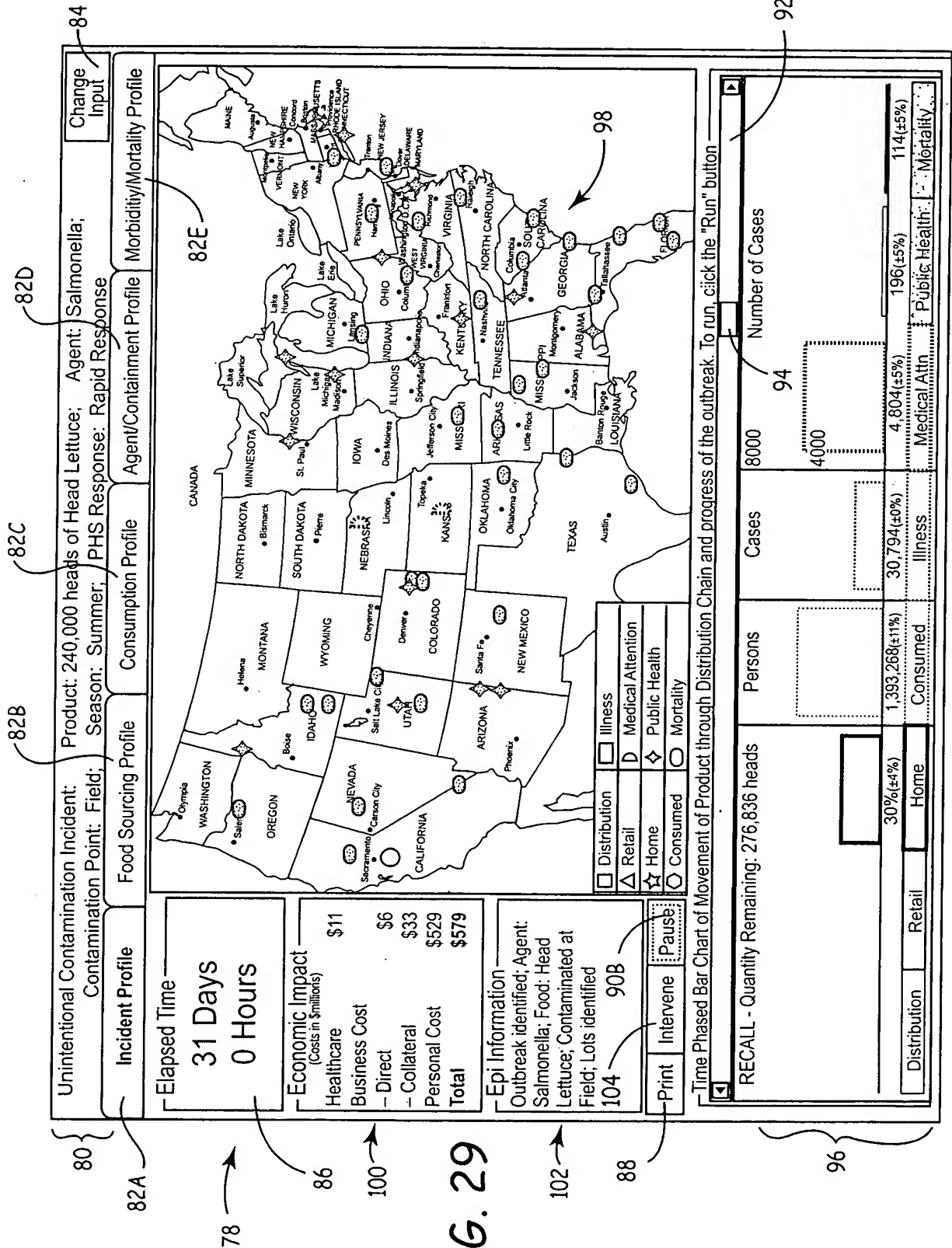
30% (±4%)	1,395,147 (±11%)	20,492 (±5%)	2,897 (±5%)	100 (±5%)	63 (±5%)
Distribution	Retail	Home	Consumed	Illness	Medical Attn
			Public Health		

FIG. 27





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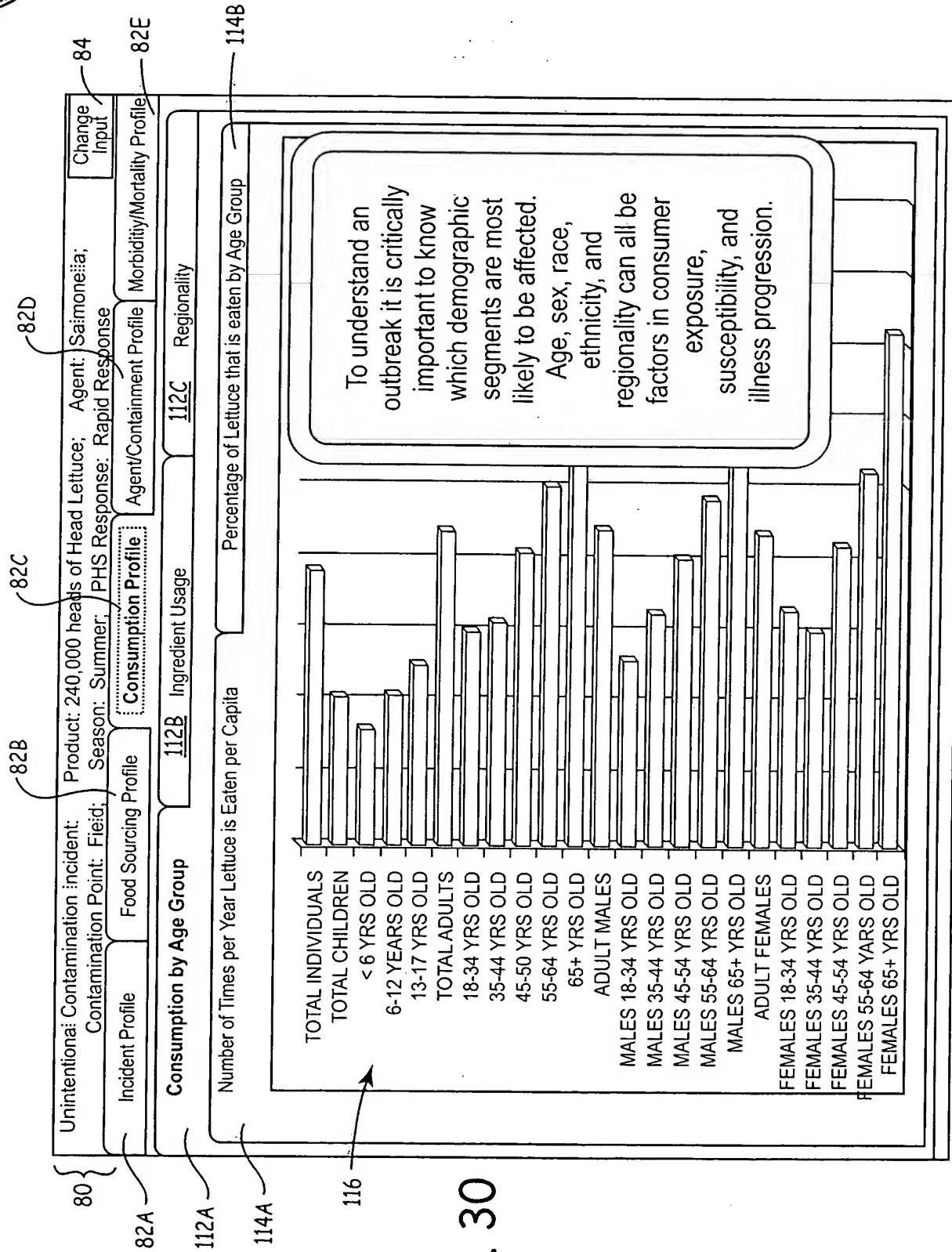


FIG. 30

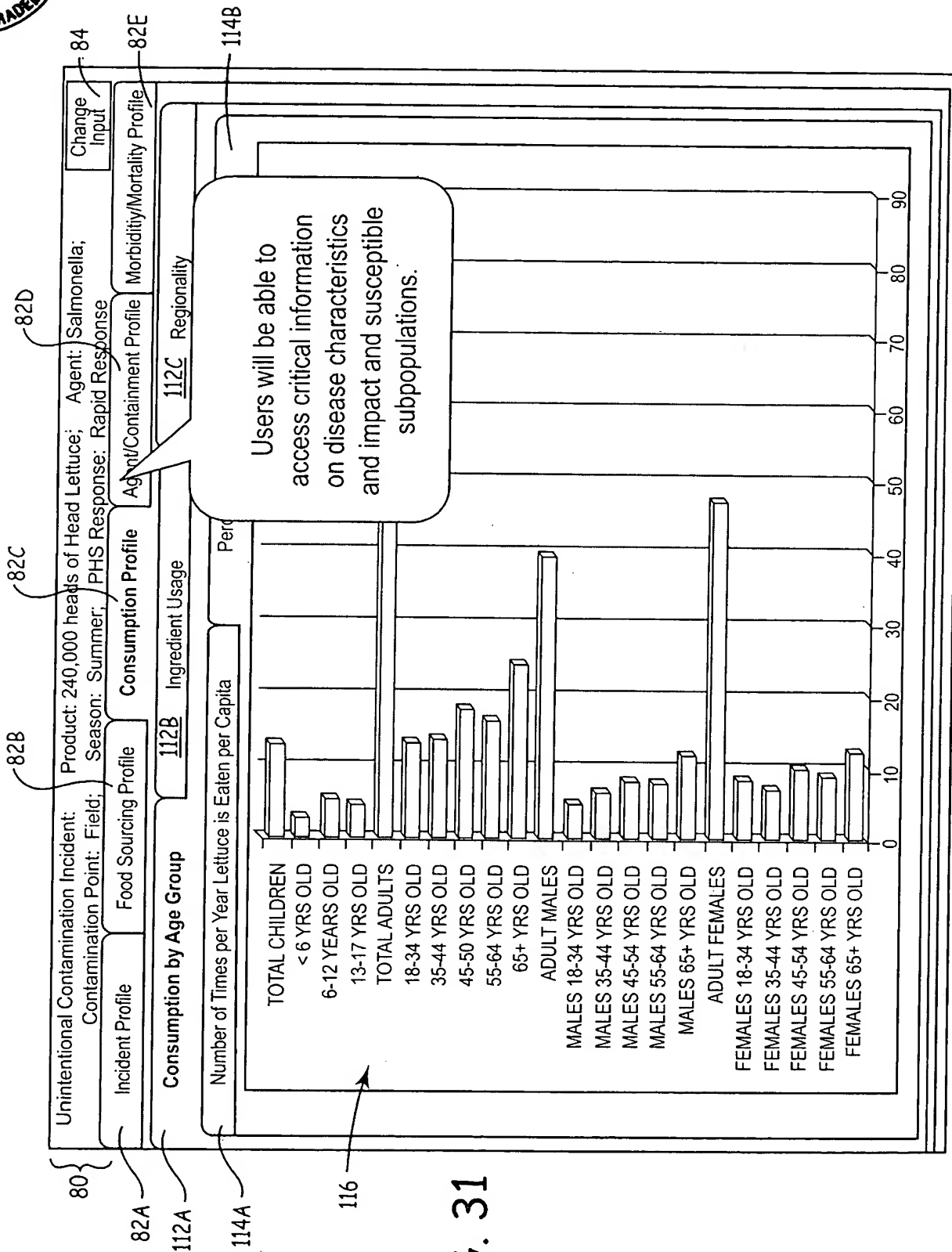


FIG. 31